INDIANA
Epidemiology
NEWSLETTER

Indiana State Department of Health

Epidemiology Resource Center
2 North Meridian Street, 3-D
Indianapolis, IN 46204
317/233-7416

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Animals at Fairs and Festivals

James Howell, DVM
ISDH Veterinary Epidemiologist

Summer is the time for fairs and festivals in Indiana. Almost every community or county in Indiana has a festival or a fair displaying agricultural products, 4-H Youth Programs, or other community industries or history with pride. Often these events include the exhibits of animals as part of the livestock show, petting zoos, or carnival games that sell or give animals as prizes.

The presence of animals at these public settings can be rewarding, from the pride of showing an award winning animal, handling or petting farm animals that have been seen only from a distance or in a picture, to becoming the owner of a new pet. There is also a potential downside to the inclusion of animals at our fairs and festivals. Lack of understanding the risks associated with animal exhibits and inadequate planning and preparation to reduce those risks can lead to illness and injury of those who handle animals in these settings. A number of disease outbreaks has been linked to fairs or festivals over the past several years where animals were present or in proximity to the event. In 1996, an Indiana infant died as the result of a *Salmonella* infection acquired from an iguana awarded as a prize at a county fair.

The greatest threat of handling animals in these settings is the transmission of enteric diseases from animals to people. The most common enteric diseases associated with animals are *Escherichia coli* O157:H7, *Salmonella, Campylobacter,* and *Cryptosporidium parvum.* Disease transmission at exhibits is most often related to exposure to cattle, sheep, and goats, but other animals, including exotic pets (especially reptiles and amphibians), can also be sources of infections. The Indiana State Department of Health has received several reports of *Salmonella* infections originating from pet reptiles in the past several months, highlighting the risk these pets pose. Baby poultry have long been associated with transmission of *Salmonella* infections.

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Animals may harbor these organisms in their intestinal tracts without evidence of disease and then shed them in their feces under the stressful conditions of the exhibit and handling by a large number of people. When an animal's hair, fur, or skin is contaminated with fecal matter containing these organisms, it is easy for human hands to become contaminated. Transmission can also occur from contamination of food such as raw milk or food served and/or consumed in a contaminated environment. Some of these organisms can survive for several months in facilities where animals have been housed.

Environmental factors that can contribute to transmission of enteric infections at fairs and festivals include inadequate hand-washing facilities, poor hand-washing techniques, temporary food facilities, contaminated or overtaxed drinking water systems, or inadequate waste disposal systems. Other factors that often lead to enteric disease outbreaks associated with these venues include the large number of children in attendance and hand-to-mouth activities that enhance the fecal-oral transmission of infections (thumb-sucking, eating, drinking, smoking) in the vicinity of animals or after handling animals without adequate hand washing. Several outbreaks in children have been linked to visits to farms, petting zoos, and reptile exhibits that lack proper hand-washing facilities, a lack of emphasis on the need for hand washing, and unsupervised hand washing.

To reduce the risk of an enteric disease outbreak among fair or festival attendees, the following steps should be taken:

1. Do not allow food or beverages to be prepared or consumed in animal areas. In addition, smoking and babies with bottles or pacifiers should not be permitted in animal areas.
2. Hand-washing stations should be placed at exits from animal areas. If stations with running water are not practical, hand-sanitizer stations can be substituted.
3. Areas where touching of animals or touching of surfaces where animals are contained should have manure removed promptly and any surfaces that people might touch should be cleaned and disinfected. All animal areas that will be used for non-animal activities should be thoroughly cleaned and disinfected after animals are removed and prior to other use.

Turtles and the Law

Jim Howell, DVM
ISDH Veterinary Epidemiologist

The U.S. Food and Drug Administration (FDA) has banned the sale of pet turtles, terrapins, and tortoises with a carapace (shell) less than four inches in length since the 1970s. This ban was instigated because these small turtles are known carriers of *Salmonella* and have been associated with outbreaks of *Salmonella* infections in people, especially children, over the years. The regulations governing the actions that the FDA may take can be reviewed at: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?FR=1240.62.

In addition to the four-inch rule, the Indiana Department of Natural Resources (DNR) also prohibits (with some exceptions) the sale or transport of several species of reptile and amphibians native to Indiana. Turtles and terrapins include:

- Common snapping turtle
- Smooth soft-shell turtle
- Spiny soft-shell turtle
- Alligator snapping turtle
- Eastern mud turtle
- Musk turtle
- Midland painted turtle
- Western painted turtle
- Spotted turtle
- Blanding's turtle
- Map turtle
- False map turtle
- Ouachita map turtle
- Ornate box turtle
- Red eared slider

For assistance in identifying individual turtle species, pictures are available at www.chicagoherp.org. The complete DNR rules on this subject can be viewed at http://www.in.gov/dnr/fishwild/endangered/turtles.htm.

4. Children under age five should be carefully supervised by adults when handling animals to ensure hand-to-mouth activities do not occur and that adequate hand washing follows the animal contact.

In addition to enteric disease, injuries are always possible when handling animals. Animal bites pose a special risk, due to the potential for transmission of rabies. No one has died from rabies as a result of an exposure at a fair or festival; however, there have been several incidents nationwide where hundreds of individuals received rabies post-exposure prophylaxis because of contact with an animal on display that was later diagnosed as rabid. Animals for which there is a licensed rabies vaccine available should be vaccinated sufficiently in advance of the event to ensure that they are not incubating rabies. Animals for which there is no licensed vaccine or that are not old enough to have received the vaccine should not be displayed in a manner that will allow direct contact with the public. This would apply in particular to wild animals (including dog/wolf or dog/coyote mixes) for which there is no licensed vaccine. Animals such as raccoons or descented skunks kept as pets are still considered wild animals. The DNR does not allow wild animals, even those allowed as pets, to be displayed in a manner that would allow contact with the public.

Animals are an important part of our daily lives and contribute greatly to the experience of a fair or a festival. The advice provided here will help ensure that the experience with animals is a safe and pleasant one.

ISDH Hires New Enteric Epidemiologist

Lee Bray, formerly of the ISDH Food Protection Program, has joined the ISDH Epidemiology Resource Center as the new Enteric/Foodborne Disease Epidemiologist. His responsibilities will include enteric disease outbreak investigation, reportable enteric disease surveillance and case investigation, and enteric disease data analysis. Lee may be reached at 317-234-2808 or lbray@isdh.state.in.us. This position was formerly held by Pam Pontones, currently the Field Epidemiology Director.

OUTBREAK SPOTLIGHT….

"Outbreak Spotlight" is a regularly appearing feature in the *Indiana Epidemiology Newsletter* to illustrate the importance of various aspects of outbreak investigation. The event described below highlights a rapid, integrated response conducted by a local health department to prevent a community-wide outbreak.

An Exercise in Preparedness

Tom Duszynski, ISDH Field Epidemiologist
Public Health Preparedness District 2

It seems that in the world of local health departments (LHD), disease outbreaks generally occur just before a holiday weekend or when the health officer is out of the office. Recently, the health officer was on vacation when the LHD was notified of a potential outbreak two days before the Easter weekend.

The executive director of a retirement facility contacted the St. Joseph County Health Department (SJCHD) reporting that an outbreak of gastrointestinal illness among residents and staff was worsening by the hour. By noon that day, at least 30 residents and staff were ill, several of whom required transportation to the local hospital for treatment of dehydration.

Upon receiving the call, the SJCHD immediately sent a team of environmental health specialists and public health nurses to the facility to determine if an outbreak existed and to gather as much information as possible. The field team inspected the kitchen facility and interviewed the executive director and some of the staff. The information the team gathered in a short amount of time proved to be vital to the SJCHD's further response. While the team was en route to the facility, the SJCHD immediately notified the Indiana State Department of Health (ISDH) field epidemiologist for Public Health Preparedness District 2 to report a possible foodborne illness outbreak.

Once the field team members returned from the facility, they met with the SJCHD epidemiologist, the supervisor of the public health nurses, the manager of the food services division and the ISDH District 2 field epidemiologist. Based on the field team's findings, it was determined that the facility was experiencing a serious outbreak. Staff members at the SJCHD had already begun developing a questionnaire, including a broad case definition and a 72-hour food history. This was expedited by having the facility's executive director fax the menus from the previous week to SJCHD.

More cases were identified and the outbreak threatened to spread into the community. The SJCHD heightened its response. The SJCHD notified the backup health officer, the administrator of the day, the public information officer, a health board member, local hospital emergency department, the mayor's office, and the county commissioners office. The SJCHD sent a larger field team to the facility to conduct interviews with residents and staff. The SJCHD field staff members who were performing other duties were asked to report to the facility, if possible, to aid in the investigation.

The facility's administration established a core group on-site to lead the investigation there. As the SJCHD field staff members reported for duty, this core group would assign them to a particular wing of the facility to conduct interviews. The field staff interviewed the residents in their apartments since the facility had issued self-imposed quarantine and isolation of all residents. It was determined that there should be at least two field persons per interview, and that facility staff would be available to accompany the interviewers at a resident's request. Facility

staff members were a valuable resource since the residents were very worried about becoming ill and wanted information about what was happening.

In addition to restricting residents to their apartments, other control measures were implemented before the second SJCHD team arrived. The executive director closed all of the common rooms including the dining room. Staff began extensive cleaning of all contact surfaces in those rooms using a bleach water solution. All leftovers from the previous 72 hours were held for possible sampling. Residents were served soup and sandwiches in their apartments. Signs were posted at the main entrance of the facility to inform visitors of the outbreak in an attempt to prevent it from spreading further in the community. Finally, the residents were kept informed of the situation via an "in-house" channel that was updated with new information as it developed, as well as asking residents to inform the staff if they became ill. Ill staff members were excluded from work until symptoms resolved.

The SJCHD conducted more than 80 resident and staff interviews in less than two hours. All persons at the facility were interviewed, since it was unclear who was symptomatic. The field team identified several additional cases, including one who required transportation to the hospital due to dehydration. The rapid gathering of information enabled the SJCHD to quickly determine that this outbreak was most likely due to person-to-person transmission instead of foodborne. A line listing of all the foods eaten by the symptomatic and non-symptomatic persons was developed. This indicated that there were no food items consumed specifically by symptomatic persons. This was later supported by statistical analysis of food-item consumption. Although one food service worker was ill with compatible symptoms prior to the outbreak, she was excluded from work while ill and did not return until symptoms ceased. Several days then elapsed before the start of the actual outbreak, during which approximately three other residents became ill. If the outbreak had been foodborne, a large surge of cases occurring at one time over several areas of the facility would have been expected shortly after any food contamination. No other symptomatic food workers were identified.

The field team provided the facility's executive director with ISDH enteric specimen collection containers to distribute among the ill residents and staff who would be capable of submitting a stool specimen. Since the ability of residents to provide information varied, it was critical to maintain constant communication with facility staff to aid the information gathering process.

Stool specimens were collected over the holiday weekend, and the facility's executive director stored them in a locked refrigerator to maintain chain of custody. By Monday evening, 16 samples were available, and by late Tuesday morning, a courier service had delivered them to the ISDH Laboratories. Within 24 hours, the SJCHD was notified that 14 of the 16 samples tested positive for Norovirus.

Within one week, an outbreak was identified, questionnaires were completed, inspections conducted, samples collected and control measures implemented. This serves as an excellent example of what can be accomplished when a LHD is prepared for a public health emergency, then coordinates and communicates to all staff members, as well as with the ISDH, to respond to that emergency.

Training Room

Anti-Terrorism Advisory Council
Indiana State Department of Health
Counter-Terrorism and Security Council
State Emergency Management Agency

Bio-Terrorism: Working Together Is The Antidote

(Regional 1-Day Forensic Epidemiology Training Sessions)

The United States Attorney's Office for the Southern District of Indiana, the United States Attorney's Office for the Northern District of Indiana, the Anti-Terrorism Advisory Council, Indiana State Department of Health, Counter-Terrorism and Security Council, and State Emergency Management Agency are hosting several one-day training sessions entitled, ***Bio-Terrorism: Working Together Is The Antidote*** over the summer of 2004. The training will be held at various locations based on the ten ISDH/SEMA districts. Attendees are encouraged to attend the session scheduled for their ISDH/SEMA district, however attendees may request any location as long as space is available. (See the enclosed map of the ISDH/SEMA districts). ***Registration will begin at 7:30 AM and training starts at 8:30 AM each day, concluding at 4:30 PM (all times are local time for that location).***

This one-day course will bring together law enforcement, firefighters, emergency medical, emergency management, school officials, school nurses, elected officials, public health officials, hospital and community health center personnel, public information officers, and coroners so that they may better respond to a bio-terrorism or other public health emergency in their community.

Topics Include

Epidemiology for Law Enforcement
Criminal Investigation for Health Professionals
Table Top Exercise Based on Real Life Events
And more…

Registration

Registration forms should be returned to:

DISTRICTS 1, 2, 3

Frank Horvath
Intelligence Specialist
U. S. Attorney's Office, Northern District of Indiana
5400 Federal Plaza, Suite 1500
Hammond, IN 46320
Telephone: (219) 937-5500
FAX: (219) 852-2770
E-MAIL: frank.horvath@usdoj.gov

DISTRICTS 4, 5, 6, 7, 8, 9, 10

Joe Wainscott
Law Enforcement Coordinator
U. S. Attorney's Office, Southern District of Indiana
10 West Market Street, Suite 2100
Indianapolis, IN 46204
Telephone: (317) 226-6333
Fax: (317) 226-0560

*For Districts 4, 5, 6, 7, 8, 9, and 10 there is a **$20.00** per person fee for this training and pre-registration is required. A working lunch and break refreshments will be provided.*

For Districts 1, 2, and 3 there is no fee, however, no lunch or refreshments will be provided.

No lodging or per diem reimbursement is available for this training.

Confirmation letters will be sent and will include the training location information and map.

Bio-Terrorism: Working Together Is The Antidote

(Choose Your Day and Location)
Training Course Registration

There is a $20 per person fee for this training and <u>pre-registration is required</u>. No lodging or per diem reimbursement is available for this training. Registrations must be completed and returned with payment or P.O.

PLEASE PRINT

Name: _____ _____ _____
(First) (MI) (Last)

Position/Title: _____

Mailing Address: _____

_____

Agency: _____

County: _____ ***Telephone: (_____)*** _____

E-Mail Address _____

Discipline Represented (Circle One): ***LAW ENFORCEMENT FIRE/EMS SCHOOL***

PUBLIC HEALTH/MEDICAL EMERGENCY MGT OTHER_____

CHECK THE DATE/LOCATION YOU WISH TO ATTEND, SELECT ONLY ONE:

	June 22, 2004 District 6 Muncie	*DUE NLT 6-11-04*
	June 23, 2004 District 4 Crawfordsville	*DUE NLT 6-11-04*
	July 20, 2004 District 9 Clifty Falls State Park-Madison	*DUE NLT 7-9-04*
	July 21, 2004 District 10 Jasper	*DUE NLT 7-9-04*
	August 5, 2004 District 5 Greenfield (Counties other than Marion)	*DUE NLT 7-26-04*
	August 6, 2004 District 7 Greencastle	*DUE NLT 7-26-04*
	August 10, 2004 District 8 Nashville	*DUE NLT 7-30-04*
	August 18, 2004 Marion County Only Indianapolis	*DUE NLT 8-9-04*

MAIL REGISTRATION FORM <u>AND</u> CHECK (Payable To <u>LECC SDIN</u>) <u>OR</u>
FAX REGISTRATION FORM <u>AND</u> P.O. TO:

Law Enforcement Coordinator
U. S. Attorney's Office
10 West Market Street, Suite 2100
Indianapolis, IN 46204
FAX: (317) 226-0560

DISTRICTS 1, 2, and 3
Bio-Terrorism: Working Together Is The Antidote
(Choose Your Day and Location)
Training Course Registration

There is no fee for the training in these locations, but pre-registration is required. No lunch will be provided at these locations. No lodging or per diem reimbursement is available for this training.

PLEASE PRINT

Name: _____ _____ _____
(First) **(MI)** **(Last)**

Position/Title: _____

Mailing Address: _____

_____

Agency: _____

County: _____ ***Telephone: (_____)*** _____

E-Mail Address _____

Discipline Represented (Circle One): ***LAW ENFORCEMENT*** ***FIRE/EMS*** ***SCHOOL***

PUBLIC HEALTH/MEDICAL ***EMERGENCY MGT*** ***OTHER***_____

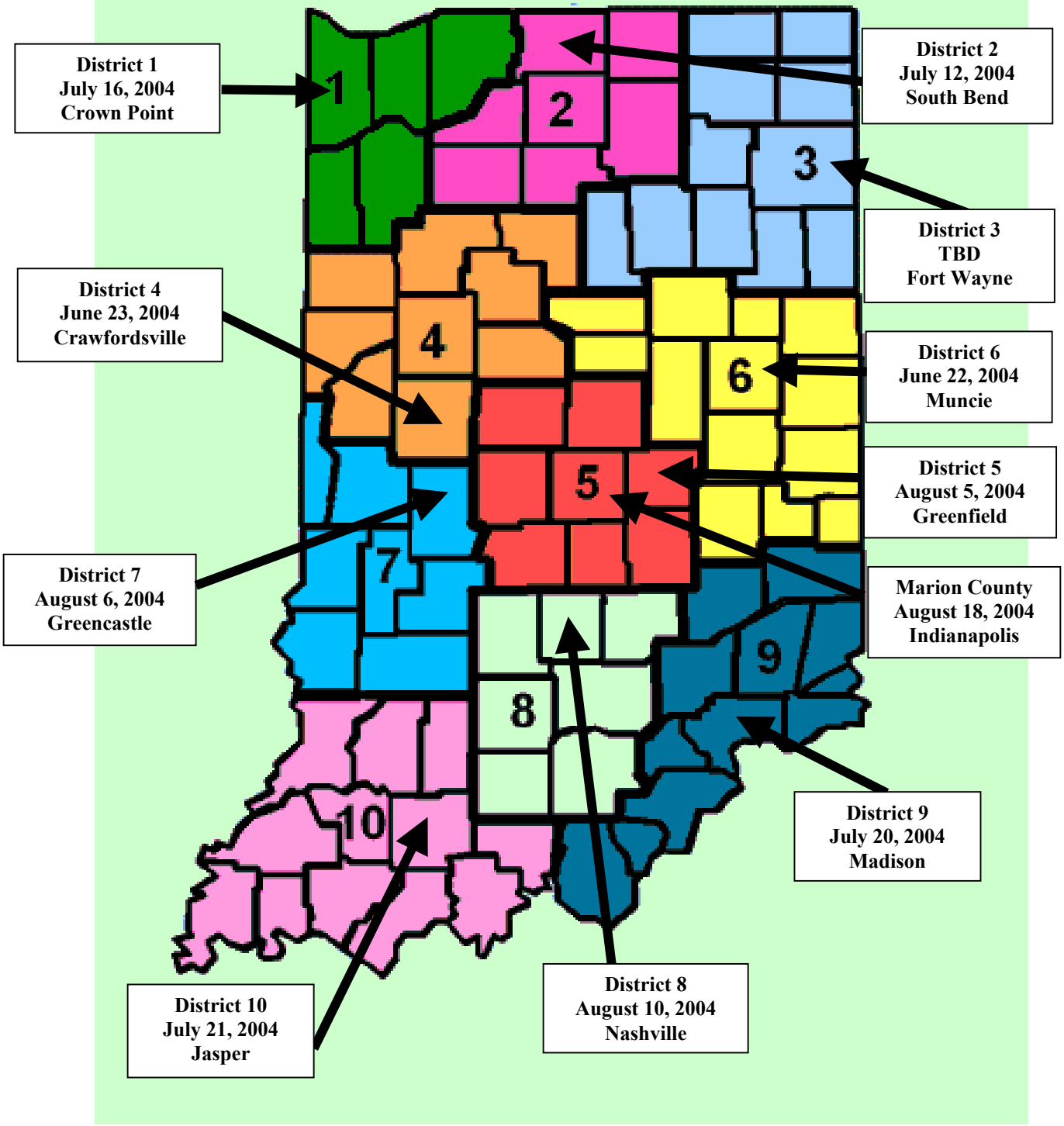
CHECK THE DATE/LOCATION YOU WISH TO ATTEND, SELECT ONLY ONE:

	July 12, 2004	***District 2 South Bend***	*DUE NLT 7-2-04*
	July 16, 2004	***District 1 Crown Point***	*DUE NLT 7-6-04*
	TBD	***District 3 Fort Wayne***	*TBD*

FAX OR E-MAIL REGISTRATION FORM TO:

Frank Horvath
Intelligence Research Specialist
U. S. Attorney's Office, Northern District of Indiana
5400 Federal Plaza, Suite 1500
Hammond, IN 46320
FAX: (219) 852-2770
E-MAIL: frank.horvath@usdoj.gov

Joint SEMA / ISDH Homeland Security District Map



Indiana State Department of Health
Immunization Program
Presents:

"Child and Adolescent Immunizations from A to Z"

The ISDH Immunization Program and Health Educators are offering this free, one-day educational course on all aspects of immunization practices. Topics include:

- Principles of Vaccination
  - Overview of the immune system
  - Classification of vaccines
- An overview of Vaccine-Preventable Diseases
- General Recommendations on Immunization
  - Timing and spacing
  - Contraindications and precautions to vaccination
- Safe and Effective Vaccine Administration
  - Prior to administration
  - Administration
  - Documentation and reminder/recall
  - Adverse Events
- Safe Vaccine Storage and Handling
- Indiana Requirements
  - Schools
  - Day care/Head start
  - Exemptions
- Tools to read Immunization Records
- Vaccine Misconceptions
  - MMR and autism
  - Thimerosal and mercury
  - Overloading the immune system
  - Influenza vaccine
- Reliable Resources

This course is designed for all immunization providers and staff. Presentation of this course takes six hours or can be customized to provide the components needed for your office or clinic staff. A training manual and certificate of attendance is provided to all attendees.

Courses are held throughout Indiana about four times per month (see schedule next page). All persons involved in immunizations are encouraged to attend a course in their area. Registration is required. To attend or schedule/host a course in your area, or for more information on "Child and Adolescent Immunizations from A to Z" and other immunization education opportunities, please contact:

Beverly Sheets
317-501-5722
hepbbev@aol.com

CALENDAR 2004 IMMUNIZATIONS FROM A TO Z"

June 2, 2004 "Immunization A-Z" Boone Co., Lebanon, 9 AM-3PM

June 11, 2004 "Immunization A-Z" Wayne Co., Richmond, 9 AM-3 PM

June 15, 2004 "Immunization A-Z" Jay Co., Portland, 9 AM- 3 PM

June 23, 2004 "Immunization A-Z" Vigo Co., Terre Haute, 9 AM-3 PM

Sept.1, 2004 "Immunization A-Z" Lake Co., 9AM-3PM

Sept. 15, 2004 "Immunization A-Z" Indianapolis, Medical Mgmt. (full)

Sept. 17, 2004 "Immunization A-Z" ISDH Rice Auditorium, 9 AM-3PM

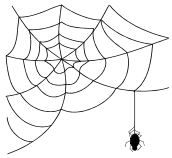
NOTE: NO COURSES WILL BE SCHEDULED FOR JULY AND AUGUST.

NOTE: THERE IS NO CHARGE FOR ANY OF THESE EVENTS

NOTE: YOU MUST REGISTER FOR THESE EVENTS. TRAINING MATERIALS ARE PROVIDED.

NOTE: NO county courses will be scheduled for July and August.
There is NO CHARGE for any of these events.
YOU MUST REGISTER for these events. Training materials are provided.

Contact Beverly Sheets at (317) 501-5722 or email hepbbev@aol.com for further information and to schedule "Immunizations From A –Z" and other immunization events in your area.



Wonderful Wide Web Sites

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.statehealth.in.gov/dataandstats/epidem/epinews_index.htm

Indiana Cancer Incidence Report (1990, 95,96, 97)

Indiana Cancer Mortality Report (1990-94, 1992-96)

Indiana Health Behavior Risk Factors (1995-96, 97, 98, 99, 2000, 2001, 2002)

Indiana Health Behavior Risk Factors (BRFSS) Newsletter

Indiana Hospital Consumer Guide (1996)

Public, Hospital Discharge Data (1999, 2000, 2001)

Indiana Maternal & Child Health Outcomes & Performance Measures (1988-97, 1989-98, 1990-99, 1991-2000)

Indiana Marriage Report (1995, 97, 98, 99, 2000)

Indiana Mortality Report (1999, 2000, 2001, 2002)

Indiana Natality Report (1995, 96, 97, 98, 99, 2000, 2001, 2002)

Indiana Induced Termination of Pregnancy Report (1998, 99, 2000)

Indiana Infectious Diseases Report (2000)

Former Indiana Report of Diseases of Public Health Interest (1996, 97, 98, 99)

HIV Disease Summary

Information as of May 31, 2004 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

346	New HIV cases from June 2003 thru May 2004	12-month incidence	5.69 cases/100,000
3,834	Total HIV-positive, alive and without AIDS on May 31, 2004	Point prevalence	63.06 cases/100,000

AIDS cases to date:

475	New AIDS cases from June 2003 thru May 2004	12-month incidence	7.81 cases/100,000
3,745	Total AIDS cases, alive on May 31, 2004	Point prevalence	61.60 cases/100,000
7,606	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of Selected Notifiable Diseases

Disease	Cases Reported in May *MMWR* Week 18-22		Cumulative Cases Reported January - May *MMWR* Weeks 1-22	
	2003	2004	2003	2004
Campylobacteriosis	45	20	97	118
Chlamydia	1,786	1,375	7,228	7,307
E. coli O157:H7	6	0	15	9
Hepatitis A	8	3	20	16
Hepatitis B	6	4	10	13
Invasive Drug Resistant *S. pneumoniae* (DRSP)	21	16	82	76
Invasive pneumococcal (less than 5 years of age)	11	2	27	23
Gonorrhea	620	435	2,702	2,477
Legionellosis	2	1	6	8
Lyme Disease	1	0	5	1
Meningococcal, invasive	3	0	19	8
Pertussis	7	17	25	39
Rocky Mountain Spotted Fever	0	0	0	1
Salmonellosis	92	47	182	159
Shigellosis	17	12	51	59
Syphilis (Primary and Secondary)	7	6	19	20
Tuberculosis	10	9	51	55
Animal Rabies	0	1	2 (bats)	3 (2 bats and 1 skunk)

For information on reporting of communicable diseases in Indiana, call the *ISDH Epidemiology Resource Center* at (317) 233-7665.

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Epidemiology
Newsletter

The *Indiana Epidemiology Newsletter* is published by the Indiana State Department of Health to provide epidemiologic information to Indiana health professionals and to the public health community.